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RE: Comments on Reservation White Paper (June 25, 2002)

The following comments are submitted on behalf of the World Wildlife Fund, Natural Resource Defense Council and the Environmental and Land Use Law Center. The "white paper" is an important first step towards developing a methodology for identifying and reserving water for natural systems while providing an appropriate level of protection to existing legal sources. However, it is difficult to provide meaningful feedback until there is an opportunity to review modeling that illustrates the consequences of various approaches under consideration. In the absence of such necessary analyses of how committing to one approach over another will benefit restoration of the natural system, our comments must be considered preliminary in nature.

In general, the outline of proposed procedures for identification of the pre-CERP baseline, the pre-CERP reservation of water for the environment, and the quantification of amounts of water to be "protected" from transfer or elimination by CERP was very informative. However, the commenting organizations have a number of concerns with the approach outlined in the white paper, and items or issues not adequately addressed therein. Detailed in the body of our comments, our chief concerns are the following:

(1) The District does not plan to reserve the water in the regional system that is currently used by fish and wildlife. The amount of existing water currently delivered by the C&SF project that is needed by fish and wildlife should be immediately reserved. "Current deliveries" include amounts of water authorized for delivery to respond to an existing need. The primary purpose of such a reservation would be to protect the pre-CERP baseline of water for the natural system from consumptive use permitting or

operational changes. The Savings Clause only protects a source of water from impacts that result from implementation of CERP. The initial reservation can be adjusted as "new" water is captured by CERP.

(2) The only mention of a pre-CERP reservation for the natural system is limited to the Water Conservation Areas and Everglades National Park. We are deeply troubled by the omission of other important parts of the ecosystem that are intended to reap benefits from CERP implementation, such as Biscayne Bay, the Caloosahatchee Estuary, the St. Lucie Estuary, Big Cypress Preserve and the Lake Worth Lagoon.

(3) The paper raises an issue over whether the C-111 and Modified Water Deliveries Projects should be incorporated into the baseline. Our organizations consider it imperative that this be done, considering these projects were authorized at the time of the authorization of CERP, are nearly completely constructed, particularly in the case of the C-111 Project, and had been previously included in the baseline (2050 without project condition) during the CERP planning process.

(4) It is also critical that operational conditions for water management in and around Everglades National Park incorporate annual minimum water deliveries, along with Base 1983 canal stages in the South Dade Canal System as these are the authorized stages and have been used in project planning processes.

(5) The paper fails to provide an adequate process for the quantification of water sources for, and deliveries to, fish and wildlife. These should be quantified utilizing baseline operational conditions, unless there is a demonstration that such deliveries are harmful to the specific natural area being considered.

Section by section comments are detailed below:

Sections I, II and III.

The introductory sections; "Purpose", "Summary of Relevant Legal Directives" and "Conceptual Relationship between Water Supply and Demands for Human and Natural Systems, Resource Protection Tools and CERP" do a good job of describing the background and regulatory backdrop for the issues identified in the paper. Because these sections are largely explanatory we have no substantive comments on these sections.

Section IV

"Key Concepts in Identifying the Pre-CERP Baseline and Existing Legal Sources of Water"

The pre-CERP condition baseline will provide the basis for quantifying the amount of water made available by CERP, and serve as a basis for the adoption of Regional Water Availability rules to guide future consumptive use permitting. The pre-CERP baseline should document the availability of water from the C&SF Project, as it was constrained and operated on December 2000. "New" water made available by CERP will be quantified by comparison to this baseline.

The identification and adoption of the pre-CERP baseline will have significant consequences as CERP is implemented over the next four decades, and beyond. The federal programmatic regulations, to be adopted by the end of this year, will likely require the Department of the Interior (DOI) concur with the pre-CERP conditions baseline. Accordingly, a process for obtaining DOI's input and concurrence should be established as part of this state process.

General System –Wide/Regional Conditions

The conditions will be based on the assumptions in the 1991 Restudy and the 1995 base case of the Lower East Coast Regional Water Supply Plan (LECRWSP), updated to reflect conditions as of December 2000. This concept seems to be a valid approach. However, more details are needed as to how the underlying assumptions are proposed to be updated, and what efforts will be undertaken to verify the key assumptions underlying the Restudy and LECRWSP.

Hydrologic conditions

A preliminary issue raised in the white paper is which of several available methods of estimating supplemental irrigation requirements should be used. (pg 13, lines 16-17) Given the significant ramifications of establishing the pre-CERP baseline, the most accurate method to estimate the reasonable 1-in-10 annual crop demands must be employed. The Penman-Monteith method is well established as the most accurate and robust method to estimate reference ET. The past decade of research has solidified its status as the international standard by which to judge other reference ET methodologies and is the preferred method by which to estimate crop coefficients. In fact, the Penman-Monteith method is proposed to be utilized in the District's consumptive use permitting criteria as one of the "b-list" rule changes. For consistency sake and because of its superior accuracy the Penman-Monteith methodology should be used in establishing the estimates of supplemental irrigation requirements to be included in the pre-CERP baseline.

Physical Conditions/Structures

It is critical that key restoration projects that had Federal authorization at the time WRDA was enacted – specifically including the C-111 and Modified Water Deliveries projects -- be accounted for in the pre-CERP baseline. It is a well-established rule of statutory construction that lawmakers are presumed to know the state of the law at the time they enact legislation. See Stivers v. Ford Motor Credit Company, 777 So. 2d 1023 (4th DCA 2000). Congress must be presumed to have known that the C-111 and Modified Water Deliveries were authorized, and made no effort to exclude them from the protections afforded existing legal sources. In fact, WRDA 2000 specifically references the Modified Water Deliveries Project as requiring *completion* prior to implementation of particular CERP projects. Moreover, these projects, in particular the C-111 Project, are virtually complete, and it would be unrealistic not to assume that they will be finished and operated. Finally, these projects were incorporated in the CERP planning process as part of the "2050 without project" baseline condition.

Additionally, the quantity of water needed for state mandated projects such as STA's authorized by the Everglades Forever Act should be accounted for in the CERP baseline as well. The mandates of the Everglades Forever Act were enacted well before WRDA 2000. STA 1 East and STA 3 / 4 must not be excluded based upon the mere happenstance of their construction status at the time of the enactment of WRDA 2000. All quantities of water required to fulfill the mandates of the EFA must be included in the pre-CERP baseline as the EFA pre-dates the enactment of WRDA.

Operational Conditions

Temporary "emergency" conditions, such as those under the Interim Structural and Operational Plan (ISOP), should *not* be included in the baseline. The ISOP specifically was found to have been illegally implemented because of failure to conduct proper NEPA documentation.

The *annual* minimum water deliveries pursuant to the 1970 federal statute requiring such deliveries must be part of the operational conditions. The Experimental Program authorized in 1984 only suspended the specific monthly schedule. Finally, so-called "1983 base" canal stages for the South Dade Conveyance System should be utilized as these are the authorized canal stages. The Experimental Program canal stages were exactly that: experimental and temporary. Base 83 canal stages have also been utilized in the Mod Water and C-111 project planning processes.

Other aspects of this issue are difficult to resolve in the absence of regional modeling that demonstrates the effects of inclusion or exclusion of various water deliveries and operational protocols. However, in general, operations that

provided either intentional or inadvertent environmental benefit as of December 2000 should be accounted for the pre-CERP baseline.

Supply/Source Conditions

The general principles laid out in this section make sense. Primary, secondary and tertiary supply sources should be identified for urban, agricultural and environmental uses. The hydrologic conditions that currently trigger switching from one source to another within the regional system should be documented.

Demand Conditions

The white paper states that, as a general principal, urban and agricultural demands will be based upon that amount of water "depended upon" to meet "reasonable needs" in urban and agricultural service areas. (Page 14, lines 9-10) The issue is then raised whether demands for urban uses should be based upon what was actually used as of December 2000, or permitted uses as of December 2000. Quantities of water that are not actually being utilized should not be included among the "existing legal sources" entitled to protection from elimination or transfer. Inclusion of allocated but not actually withdrawn quantities is inconsistent with the purpose of establishing a baseline, which is to ensure that existing users are not significantly harmed by CERP implementation. In contrast to the Modified Water Deliveries Project and C-111 Projects, which address documented currently *existing* environmental needs, these allocated but unused quantities address, in many cases, *future (i.e. post December 11, 2000)* needs. Water made unavailable as a result of implementation of CERP is to be replaced. Clearly, there would be no need to replace water lost as a result of implementing the plan if that water was not actually benefiting an existing legal user

Similarly, demands associated with agricultural consumptive uses should be limited to the actual acreage irrigated on December 2000, and should not include permitted acreage that was not irrigated as of the enactment of WRDA. Supplemental irrigation permits are often granted for capacities that will never be utilized. To include quantities of water in the pre-CERP condition baseline based upon speculation that agricultural acreage may hypothetically be expanded to full permitted capacity is unjustified.

The issue of the most appropriate method of calculating evapotranspiration for estimating supplemental irrigation demand requirements is again raised. As mentioned above, the method that is both most accurate and is consistent with proposed changes to the water use permitting criteria should be used.

Rule Changes Not Related to CERP

The next issue raised relates to addressing water use rule changes outside of CERP. (Page 14, lines 26-29)

Water use permits must be conditioned to assure that uses are consistent with the overall objectives of Chapter 373 and are not harmful to the water resources of the area. Section 373.219, F.S. Everglades restoration has been expressed to be an important objective of the State of Florida. See Sections 373.4592(1)(a)-(h) and 373.1501(2), F. S. The District has statutory authority to adopt changes to its water use regulations to include consideration of the impacts of its permitting decisions, and its responses to water shortages, on the eventual realization of CERP's anticipated benefits.

To the extent the water supply is over permitted, the District loses the ability to ensure that the natural system, rather than holders of consumptive use permits, will receive the appropriate quantity of water consistent with the restoration objectives of the CERP. Rule criteria must be put in place to prevent additional over allocation from occurring, and to ratchet back permit allocations, consistent with state law, in the event that the regional system is already overtaxed.

Fish and Wildlife Demands

It will be challenging to quantify the amount of water needed for fish and wildlife. Water demands for urban and agricultural users are better established and documented than are environmental water demands. While environmental demands have not historically been explicitly defined as a component in the management of the regional water system, for purposes of establishing the pre-CERP baseline, the needs of the natural system must be on equal footing with other uses. Accordingly, modeling efforts to quantify the amount of water benefiting the natural system as of December 2000 must be made a top priority. Water for protection of fish and wildlife should be defined, at a minimum, as all current water deliveries to, and flow characteristics in, the natural system *throughout the year* under pre-CERP baseline conditions, unless such hydrologic conditions are shown to be harmful.

B. Definition of Existing Legal Sources

The "savings clause" in WRDA 2000 states that "until a new source of water supply of comparable quantity and quality as that available on the date of enactment of this Act is available to replace the water to be lost as a result of implementation of the Plan, the Secretary and the non-Federal sponsor shall not eliminate or transfer ***existing legal sources*** of water . . ."

The District's proposed definition of existing legal sources, stripped to its essence, is '[t]he quantity of water available from all locations of which there was a dependence as of December 2000 . . .". This proposed definition, as it relates

to human uses, is ambiguous in that the term "dependence" does not differentiate between actual use and permit allocations that may be much higher than actual use. The purpose of the savings clause is to ensure that implementation of CERP does not cause substantial adverse impacts on existing legal uses of water, S. Rep. No. 106-362, at 56-7, including water used by fish and wildlife. Further, the District's definition proposes to include" non-consumptive uses, including regional surface water deliveries and groundwater seepage for resource protection." While these quantities should be accounted for in modeling and planning efforts, they are not entitled to the legal protection of WRDA 2000.

As noted above, the Savings Clause requires replacement of water, that met or was intended to meet an established demand as of December, 2000, and that is made unavailable a result of implementation of CERP. There is no need to replace water lost as a result of implementing the plan if that water was not actually benefiting or needed by an existing legal user. This is consistent with 373.1501(d), F.S., which requires the District to provide reasonable assurances that "the quantity of water available to existing legal users shall not be diminished by implementation of project components so as to adversely impact existing legal users . . ."

In addition, the proposed definition fails to clearly discuss how "existing legal sources" should apply to the natural system. Congress intended to protect a broader class of uses under the savings clause than traditional consumptive uses that withdraw or divert water. Existing legal sources specifically includes water supply for fish and wildlife. Accordingly, we suggest the following definition of existing legal sources:

"The quantity of water delivered by the C&SF Project that was actually utilized for reasonable-beneficial uses or for protection of fish and wildlife as of December 2000, including water allocated to the Seminole Tribe of Florida as codified under Federal and State law, the Miccosukee Tribe of Indians of Florida, water for Everglades National Park, urban and agricultural existing legal uses for the duration of the consumptive use permit authorizing such use, and those uses exempt from permitting. "

It is important that the definition distinguish between the amount of water drawn from the regional system by legal users, and the entire volume of water. The entire volume that could potentially be used is not entitled to protection under the savings clause.

This section would benefit from a discussion of how any additional allocations that have occurred since December of 2000 will be treated as CERP implementation moves forward. What protections will these allocations receive and how will they be dealt with in determining whether a CERP project is operating as expected?

C. Spatial Identification of Existing Legal Source User Basins

The proposal to divide the C&SF project into source user basins may be reasonable, however it might also create significant barriers to implementing particular CERP projects. If a "source" is defined in terms of a compartmentalized Everglades, then there would be those who would argue that any attempt to "decompartmentalize" those sources would qualify as "source transfer" under the Savings Clause. In addition, the omission of large swaths of the natural system, including Biscayne Bay and the Caloosahatchee and St, Lucie estuaries, from the list of environmental systems is a glaring oversight that must be remedied.

D. A Method for Quantifying Existing Legal Sources through the Pre-CERP Baseline

As mentioned above, water demands for urban and agricultural users are currently better documented than are environmental water demands. As we have discussed, it is an oversimplification to state that the existing environmental system needs are reflective of the operational policies currently in place for the region. (Page 16, lines 11-14) While this statement is partially true, it does not reveal the entire picture. Certain environmental systems were benefiting or had outstanding environmental needs on December 2000 from quantities of water that were unrelated to regulation schedules or to water supply and environmental deliveries. A more comprehensive definition, along with more analysis, of the current "dependence" of the environmental system is needed.

We are supportive of the proposal to create a detailed water budget for each legal source basin. Likewise, the proposal to exclude regulatory discharges from the pre-CERP baseline based upon the reasoning that these discharges have not historically been "depended upon" by any legally protected user seems consistent with WRDA and state mandates, provided that those discharges are not providing incidental environmental benefits or are relied upon by existing restoration projects.

The above proviso is an important one. For example, CERP will not capture all of the water currently discharged, nor should it. In fact, some portion of that water was necessary in December 2000 for varied environmental purposes, such as maintaining proper salinity regimes in estuarine systems. The amount of fresh water that was providing a benefit to the natural system must be quantified and protected via a pre-CERP reservation in order to maintain the December 2000 baseline condition for fish and wildlife in the water bodies that were and still are receiving regulatory discharges.

E. Proposed Procedure for Identifying Impacts to Existing Legal Sources Through PIR Development

The white paper proposes to use the South Florida Water Management Model to estimate a proposed CERP project's potential impact on existing legal sources. The approach laid out, comparison of the PIR volume probability curve to the existing legal source users volume probability curve to determine whether there has been an elimination or transfer of the existing legal source for any user basin, holds promise. It is unclear, however, how it would be determined that a project "has not met its expected performance" (Page 18, lines 14-17), thereby necessitating "further iterations of the design", prior to finalization of the PIR.

Section V Key Concepts in Protecting Water For Natural Systems and Human Uses Made Available by CERP

A. Quantification of Regional Water Availability for Water Supply Service Areas

Regional Water Availability may help address one long-term failing of the SFWMD's water management. Throughout its regulatory history, the SFWMD has issued long-term consumptive use permits without considering the actual amount of water available. This practice has contributed to the diversion of water needed for the natural system to consumptive urban and agricultural uses. Presumably, quantification of regional water availability based upon the pre-CERP baseline condition used for the identification of existing legal sources will maximize consistency between consumptive use permitting and CERP implementation. Hopefully, quantification of regional water availability will facilitate better decisions concerning potential environmental harm resulting from allocations for consumptive uses, and ensure greater consideration of the impacts of future consumptive use permitting decisions upon CERP implementation.

However, because consumptive uses do not cease once a 1 in 10 year drought occurs, assessment of regional water availability must not be restricted to 1 in 10 year drought conditions. Although the reasonably anticipated effects of imposition of water shortage restrictions should be considered, consumptives uses during more severe droughts than 1 in 10 should taken into account.

B. Implementation of Regional Water Availability through Consumptive Use Permitting Rules

The development of an accounting procedure is an excellent concept and is long over due. We are very supportive of quantification of available water in order to

avoid over allocation. However, the statement that the accounting procedure is needed to "assure that volumes of regional water available for consumptive uses are not over allocated or likewise redirected for environmental restoration" (emphasis added) is troubling. Water that is not needed for consumptive uses should be available for environmental restoration. How will the District distinguish between volumes of regional water "available for consumptive uses" as opposed to volumes of regional water available for restoration? This statement would appear to inappropriately prioritize consumptive uses over the needs of CERP and other restoration efforts.

We support requiring permit applicants to quantify the portion of a requested allocation that is "regional water" in a manner consistent with the method used to calculate total regional water available to the service area. Additionally, we would support longer duration permits as an incentive to use alternative sources. Similar incentives to encourage conservation should be developed.

Clearly the total amount of regional water in the regional availability rule should meet both consumptive and non-consumptive uses within a service area. However, such a statement begs the question of what happens if and when the total amount does not meet consumptive and non-consumptive uses, particularly in relation to how water needed for the natural system will be considered. Existing legal uses are protected unless they are determined to be detrimental to the water resources, in which case they can be revoked or modified under Chapter 373, F.S. The District must be prepared to use its clear statutory authority to revoke consumptive use permits when necessary, regardless of how politically unpalatable that may be.

C. Establishing a pre-CERP Reservation of Water for the Environment

The purpose of a pre-CERP reservation of water for the environment is to protect the pre-CERP baseline condition in the natural system from consumptive uses, or operational modifications that would alter target hydrographs. This purpose is not clearly stated in the White Paper, but must be.

The Lower East Coast Water Supply Plan recommended a change to a rainfall driven schedule for the Water Conservation Areas and Everglades National Park. A rainfall driven delivery schedule is intended to improve timing and location of water depths in the Water Conservation Areas and Everglades National Park and to restore more natural hydropatterns. While the rainfall driven deliveries should be accounted for in the pre-CERP baseline for planning purposes, existing legal source protection must not, as indicated in the white paper, constrain implementation of the rainfall driven schedules. This constraint is not dictated by the WRDA 2000 Savings Clause because the adoption of rainfall driven reservations is not a CERP project. Existing legal sources are entitled to

protection from water unavailability that results from CERP implementation. Any constraint that would allow the natural system to further degrade pending availability of CERP benefits must be carefully scrutinized, not just under WRDA 2000 but other applicable legal provisions as well.

Also, the white paper states that subsequent to federal approval, "the portion of the rainfall driven deliveries which are projected to protect fish and wildlife will be reserved from use through state rule." The rain-driven operational concept is intended to deliver water to and from the Water Conservation Areas in order to mimic a desired target stage hydrograph at key locations within the Everglades system. A more natural hydrological regime will benefit the ecosystem as well as its fish and wildlife inhabitants. The entirety of rainfall driven deliveries must be reserved.

Finally, what about other parts of the ecosystem? Why is the only reservation of water for the Everglades Protection Area? Other portions of the natural system, such as Biscayne Bay, must also be subject to a pre-CERP reservation of water.

D. Quantification of Additional Water for Natural System and Human Uses Made Available by CERP

The biggest weakness of this section, and a key flaw of the paper as a whole, is its exclusive focus on the capacities of currently planned facilities rather than analysis of how much water is really needed for restoration. CERP is supposed to be primarily about Everglades restoration. The water to be made available by CERP should be whatever it takes to restore the remaining Everglades to "natural conditions." If analysis or experience shows that more water is needed for restoration, the District must be willing to change course. Accordingly, adaptive assessment and adaptive management was written into WRDA 2000. Locking the quantification of water availability into the capacity of the currently planned facilities seems contrary to adaptive assessment.

A first step to quantifying "additional water" made available by CERP is a regional modeling effort that is focused on the remaining Everglades. The goal of the effort would be to estimate an envelope of plausible natural system water needs, without considering all the constraints such as flood control, protection of existing legal sources, and possible phasing in of flows, etc. The goal would be to obtain the best scientific estimate of what might be needed for restoration when we are all done.

The scenario needed would likely be based upon removal of barriers to flow within the current Water Conservation Areas 3A and 3B. In this scenario, the concept of a separate basin between ENP and WCA 3A, 3B would no longer exist. The scenario would assume a range of effectiveness of seepage control along the eastern boundary, so as to take into account the possibility that the seepage control might leak, intentionally, for water supply purposes, or not leak.

The modeling scenario would not rely upon Lake Belt water into NE Shark Slough – that water should predominantly come as sheet flow from current 3B area. The only man-made control on the WCA 3A, 3B, ENP footprint would be by timing and amount of water to be added at the northern boundary of 3A. The timing and amounts of water needed would be estimated using depth performance criteria at a number of locations within 3A, 3B, and ENP.

The idea is a wide open, unconstrained area flowing as sheetflow, and driven by a combination of in situ rainfall and humanly controlled water deliveries to the upstream end. By monitoring the water depths within the area, one would determine when and how much water to deliver to the system.

The scenario would have to model an envelope of target water depths, as there is still biological uncertainty regarding the appropriate target. Modeling should take this into account – and then assume that CERP will make available enough water for the deepest plausible depth targets. Additional uncertainty would come from assumptions on hydraulic roughness – i.e., how much resistance to downstream sheet flow will actually be present in the restored system.

All of these uncertainties can easily be built into a modeling exercise, and can reasonably be expected to yield an envelope of estimates of the water quantities needed at the upstream end of WCA 3A for ecological restoration.

These estimates then become the measure of the water made available by CERP for the natural system. The estimates can be compared to estimates of availability from currently planned structures. If the facilities fall short, then adaptive management is called into play to identify how to meet the shortfall. If the facilities produce "new water" in excess of the water needed for restoration, that excess water is "available" for water supply or other appropriate human uses.

E. Protection of Additional Water for Natural Systems and Human Uses Made Available by CERP

Again, CERP is first and foremost about restoring the Everglades. A reservation of water made available to the natural system must be finalized prior to execution of the PCA. The purpose of such a reservation is to ensure that water intended for the natural system gets to the natural system, not to guarantee that "consumptive uses are adequately protected." (Page 23, Line 18)

Interestingly, scenarios for dealing with potential shortfalls in meeting future human demands are discussed, while the possibility of shortfalls in the amount of water needed to achieve restoration goals is not addressed.

APPENDIX A. Definitions

As discussed above, the commenting organizations suggest amending the proposed definition of "existing legal source" so it reads as follows:

"The quantity of water delivered by the C&SF Project that was actually utilized for reasonable-beneficial uses or for protection of fish and wildlife as of December 2000, including water allocated to the Seminole Tribe of Florida as codified under Federal and State law, the Miccosukee Tribe of Indians of Florida, water for Everglades National Park, urban and agricultural existing legal uses for the duration of the consumptive use permit authorizing such use, and those uses exempt from permitting. "

Also, we are concerned that the definition of "natural system" is limited to those areas in public ownership. Such a definition is unduly restrictive and could be highly problematic.

CONCLUSION

Thank you for your consideration of these comments. I am available to further discuss these ideas at your convenience.

Sincerely,

Marcy I. LaHart